REMARKS

Drawing Objection

In the Official Action of October 19, 2004, the drawings were again objected to under 37 CFR 1.83(a). This objection is based on claim 8 of the application which calls for the carbonator to be in the carbonated water circulation circuit between the circulation pump and the heat transfer coils. To provide clarification, all of Figures 4 through 7 have been amended through the addition of reference numeral 109 specifically directed to the heat transfer coils. The phrase "heat transfer coils" is presented in the original specification in numbered paragraph **[0018]**. Such coils are spoken of throughout the application with discussion of the cold plate in paragraphs **[0005]-[0011], [0029], [0031], [0034], [0036], [0046]-[0047]**. Reference is again made to Figure 7 where the carbonator 130 is located in the circulation circuit between the circulation pump 110 and the heat transfer coils 109. Thus, the recitations of claim 8 are more clearly established in Figure 7. Reconsideration of the objection and acceptance of the proposed drawing changes to Figures 4 through 7, attached hereto with changes in red, is requested.

Prior Art Rejections

A. Overview

Turning to the rejections based on prior art, claims 11 and 12 are rejected under 35 U.S.C. § 102 as anticipated by Vogel, U.S. Patent No. 4,781,309. Claims 1 through 10 are rejected under 35 U.S.C. § 103(a) as unpatentable over Vogel in view of Chang, U.S. Patent No. 5,839,291. By this Amendment, claims 1 through 10 have been amended, either directly or through dependence on other claims, to include the term

"closed" as part of "the carbonated water recirculation circuit". This change is made responsive to the interpretation of the phrase "circulation circuit" in the Official Action as including other than circulation circuits systems which circulate around a closed circuit. Taking direction from the comments on page 4 of the Official Action, Applicants have employed the term "recirculation circuit" to define a system for circulation around a closed circuit. Apparatus claims 22 though 30 have been added.

Claim 11 has been amended to gain consistency of terms by using "cold plate" rather than "ice plate". The terms were used synonymously; but cold plate is better understood as described in the Specification. Claim 11 has also been amended to clarify that circulation is both to and from the coupling, a closed circuit and not just a single line. Claim 12 has been amended to make the claim dependent on claim 11. Claim 12 has been made dependent on claim 11 without changing the scope thereof to keep the same number of independent claims given the addition of independent claim 13. Method claims 13 through 21 have been added.

B. 35 U.S.C. 102

Claims 11 and 12 were rejected in the Official Action as anticipated by Vogel. New claims 13 through 21 include recitations, albeit of a different scope, to which this discussion is pertinent.

1. The claimed invention

The method presented in claims 11 and 12 is specifically directed to circulation through a closed carbonated water circuit having coils in a cold plate. The method includes "recirculation of the carbonated water through the coils in the cold plate in the closed carbonated water circuit until the carbonated water both to and from the coupling

with the dispenser valve in the closed circuit is 33°F or below." The step of circulation "both to and past" the coupling has the capability for creating a uniform supply of carbonated water at or below the target temperature and present it sufficiently near the dispensing valve so as not to be affected by ambient heat. Additionally, claims 12 and 17 include "recirculation of the carbonated water through the carbonator." Including the carbonator within the circuit adds a further source of cold to the system for greater capacity. Claims 13 and 16 through 21 operate the method including a bar gun and/or flow thereto. Claims 14, 15, 20 and 21 further include a low flow recirculation. Circulation to achieve a dispense rate of something on the order of 3 ounces/sec. requires a pump having capacity in the neighborhood of 100 gal./hr. This flow rate has been found to heat carbonated water flowing through a system of the present invention. Thus, the lower rates of flow have utility in inducing circulation which can chill the carbonated water.

2. The claimed temperature

One cannot assume that the temperature of 33° F or below can be periodically achieved in a conventional cold plate system without circulation. Achieving this result without the step of circulating requires a minimum residence time for the carbonated water in the cold plate and sufficient flow through the valve to have the chilled carbonated water dispensed.

When the "casual drink" is drawn, the line from the cold plate to the dispenser valve is near ambient and certainly well above 33° F. That casual drink will, therefore, be heated above 33° F. Even if the carbonated water has had infinite time in the cold plate, a significant amount doesn't reach the glass as the line from the cold plate to the

leads for the valve have volume as well and such lines are typically not kept cold. In the bar, a soda drink is minimally 6 ounces today and a mixed drink is 3 ounces. The lines are a significant factor in the ultimate temperature of the drink as dispensed. Soda fountain drinks are 12 to 32 ounces and more. However, the distances of the connecting lines are frequently longer because of the size of the equipment dictates placement and spacing and larger with larger flow volumes used for greater flow capacity. A fountain has several valves which are stationary and separated to accommodate the placement of multiple cups. As such, additional piping in the form of a manifold is needed to feed carbonated water to the several displaced valves. To also not lose pressure to the individual valves regardless of the use of other valves, the manifold is significant in size. The temperature of the "casual drink" is significantly affected by the volume in the manifold and the lines.

When the rate of dispensing drinks is high, there is insufficient residence time in the coils under current practices. Cold plates in bars typically have coils which hold about 7 ounces. In fountain service, the numbers are higher. A large plate used in a soda fountain typically has a capacity of around 15 ounces, too large for a bar. But the drinks are also larger, 12 to 32 ounces and more. Where very large capacity is needed, a very large cold plate having fluid capacity of about 35 ounces is used to serve almost continuous use during peak hours. The results are similar for all. The standard pour rate is typically 2 ounces a second, limited by foaming of the drink as dispensed. With coils only cooled to around 32° F in an ice bin, the differential for carbonated water flowing through the coils, as it falls below 40° F, is small and heat transfer is reduced. The liquid capacities of the cold plates relative to the drinks contemplated for such

plates means that the drinks are cooled on the fly unless the system is serving the "casual drink". Therefore, the recitation of recirculation of carbonated water "until the carbonated water... in the closed circuit is 33°F or below" is meaningful and novel.

This novelty regarding the temperature is such that the owner of the present application has also registered the trademark CAN QUALITY IN A CUP, Reg. No. 2,898,810, in association with this recirculation. A can is able to hold substantial carbonation because it is sealed. The only other way to hold sufficient carbonation is through near freezing liquid. Who hasn't noticed that bar soda are almost flat and fountain sodas lack the same carbonation bite that a cold can or bottle offers.

3. Vogel

The Vogel reference applied against claims 11 and 12 is directed to a manifold 32 within which carbonated water is stored before distribution to any of multiple dispenser valves. A number of mechanisms for cooling this manifold are disclosed in separate embodiments. In the embodiment of Figures 1 through 5, a mechanical refrigeration system cools a cooling tank. Column 4, lines 1-8. The manifold which is the focus of the Vogel invention is located in that cooling tank. There is no circulation in a closed circuit of carbonated water. Rather, a coil of plain water is prechilled within the tank before going to a carbonator 26, also residing within the tank. A carbonated water line 28, 30 extends without return to the manifold 32 where it is distributed to the several dispenser valves.

Figure 7 of Vogel illustrates an alternative embodiment which does have closed circuit circulation of carbonated water. Vogel states at column 6, beginning on line 48:

> A remote refrigeration and carbonated water supply device (not shown) has a circulating pump and motor which continually circulates cold carbonated water through the plenum 32T by pumping one inlet 30T and extracting out of the second inlet 30T or vice versa.

The system employs mechanical refrigeration and does not employ a cold plate.

Finally, a last device is illustrated in Figures 8 and 9. The manifold is formed within a cast aluminum cold plate. Inlet coils 30 are also in the cold plate and feed the manifold. There is no recirculation. This arrangement is described by Vogel in column 7, beginning on line 1.

> The plenum is supplied by at least one and possibly two inlet fittings 30CP which is (sic) this case are also the water coiling coils in the cold plate 110. The inlet fitting coils 30CP will preferably be wound into involute spirals as seen in FIG. 9 and will be fed warm water at the center and then the outer most coil will be connected directly to the plenum 32CP to feed cold carbonated water into the plenum. If there are two coils 30CP, they will be one above the other and they will connect into the ends of the plenum 32CP as shown; they may also be counter flow wherein the upper one fees clockwise and the lower one feeds counter-clockwise or vice versa. If there are two inlet fitting coils 30CP, they will be fluidly connected in parallel to a supply of carbonated water.

There is no recirculation of carbonated water in this last embodiment.

The invention in Vogel is focused upon the manifold 32 and discloses each of the embodiments as alternative means for feeding the manifold. The embodiments are not compatible. In the first, the manifold is in a cold bath 12. In the second embodiment, the manifold is embedded within a block of thermal insulation 106. In the third embodiment, the manifold is embedded within a cold plate 110. In the first two embodiments, mechanical refrigeration is applied with one cooling the cold bath and the other cooling the carbonated water. It is presumed that in both cases there is

recirculation through the mechanical refrigeration unit. In the third embodiment, a cold plate system is employed without a closed circulation system. None of the disclosed embodiments together present or suggest circulating carbonated water through a closed carbonated water circuit which has a cold plate until the carbonated water reaches a temperature of 33° F or below.

The separation of embodiments within Vogel is no accident. The industry uses mechanical refrigeration units with recirculation and uses cold plates without recirculation.

Mechanical refrigeration is efficient when the refrigerant temperature is well below the fluid being cooled. When there is direct heat transfer to carbonated water in such a mechanical refrigeration system, the carbonated water must be kept at a temperature well above freezing. The refrigerant at below freezing would otherwise induce ice forming in the flow. Therefore, mechanical refrigeration cannot work well to accurately cool carbonated water to very close to freezing on a one pass basis. Not being reliable to take carbonated water down to 33° F without the prospect of ice forming in a part of the flow, mechanical refrigeration uses multiple passes which, in Vogel includes a buffer in the form of a bath, to provide the required loss of heat without creating ice in the carbonated water.

On the other hand, coils in a cold plate or in an ice bath rely on a storage of cold at the melting temperature of ice with sufficient heat sinks and fluid residence time to accommodate the anticipated cooling need. Residence time doesn't solve the problem as the heat sink suffers from the same problem as the mechanical refrigeration alone

when simply transferring the excessive cold from the mechanical refrigeration unit through the heat sink to the carbonated water.

The problem with refrigeration is the reason Vogel put the buffer provided by the ice bath in the system. The first embodiment of Vogel provides a further body of cold using the bath. This bath also can moderate the cooling to allow an overall more reliable colder temperature. Again, getting there using mechanical refrigeration requires recirculation and there is no problem with ice forming in the bath away from the coils.

The embodiment of Vogel Figure 7 uses this common practice with cooling of the carbonated water with mechanical refrigeration and circulation. Vogel doesn't disclose how the second embodiment is buffered, if at all. The temperature of the carbonated water in this second embodiment must be considered high enough to avoid any freezing as is the norm in the absence of teachings to the contrary.

The embodiment of Vogel Figure 9 uses a one pass cold plate. Cold plates use the plate as the source of stored cold along with the ice. This requires residence time as the cold plate is uniformly at or near freezing. Consequently, there is no large temperature gradient to rapidly cool incoming water as discussed above. When more capacity is needed, because of greater anticipated flow, larger cold plates are used, without changing the method of use.

Recirculation through a cold plate is not considered in Vogel. Conventional thinking has been that recirculation would add complexity to a very passive system and would use up ice to cool and keep cool the closed circuit. Indeed, at flow rates currently used for pouring drinks, recirculation has been found by the applicant to heat through friction and working of the fluid rather than to chill the flow.

Vogel does not contemplate, teach or suggest that the foregoing convention should not be followed. Rather, capacity is achieved through use of the manifold which is kept cold in each embodiment. Only the embodiment of Figure 7 has recirculation of the carbonated water. The body of cold is the carbonated water cooled by mechanical refrigeration resident in the insulated manifold. For efficient operation, the temperature of the carbonated water must be kept away from near freezing to avoid the below freezing coolant to create ice in the lines. Therefore, the industry has quite uniformly used recirculation for mechanical refrigeration and cooling on the fly through a single pass in a cold plate. Vogel reflects this convention and offers mechanical refrigeration with recirculation of carbonated water in one embodiment and single pass flow with a cold plate in another. And, as noted above, Vogel does not disclose recirculation until the temperature of the carbonated water is down to 33° F.

4. The standard applied

The Patent Office standard as presented in MPEP § 2131 for a *prima facia* case of anticipation requires the following:

> TO ANTICIPATE A CLAIM, THE REFERENCE MUST TEACH EVERY ELEMENT OF THE CLAIM
>
> "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an *ipsissimis verbis* test, i.e., identity of terminology is not required. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990). Note that, in some circumstances, it is permissible to use multiple references in a 35 U.S.C. 102 rejection. See MPEP § 2131.01.

Vogel does not describe a system where ice is supplied to a cold plate and carbonated water is circulated through a closed carbonated water circuit including the cold plate and circulating that water through the cold plate until the carbonated water is at 33° F or below. As such, all elements of claims 11 through 21 of the present application are not anticipated as required in the standard for a *prima facie* case of anticipation articulated in the MPEP. Vogel also does not disclose a bar gun as recited in Claims 13 and 16 through 21 of the present application. Vogel does not teach low flow recirculation as set forth in claims 14, 15, 20 and 21 of the present application. Additionally, Vogel does not teach the inclusion of a carbonator in a recirculation circuit as in claims 12 and 17 of the present application. Consequently, these dependant claims contribute further distinction not found in Vogel. With these features of the claims missing from Vogel as well, there is no *prima facia* case for anticipation as required under Section 102.

C. 35 U.S.C. 103

1. The claimed invention

Claims 1 through 10 are rejected under 35 U.S.C. § 103(a) as unpatentable over Vogel in view of Chang, U.S. Patent No. 5,839,291. Again, it is believed that a short discussion of the nature and purpose of the present invention presented in the system of claims 1 through 10 in the context of the prior art would be of assistance. The system claims include a "*recirculation circuit*", a "*bar gun*", a "*circulation pump*" capable of inducing circulation in the circuit and an "*ice storage bin*" having "*heat transfer coils*" therein. The recirculation circuit is for carbonated water.

The employment of the bar gun in conjunction with the nature of the circuit is particularly advantageous in bars. The bar environment is typically quite demanding.

There is frequently little space, a lack of room for a mechanical refrigeration unit and an inability to accommodate the heat of such a mechanical refrigeration unit. Further, bars over a period of a few hours can experience demands from the "casual drink" level to a volume taxing the capability of a small mechanical refrigeration unit. Further, as discussed above, the lack of space with a bar restricts the size of any mechanical refrigeration system such that creating a body of cold, even in the carbonated water, becomes difficult.

The claimed system has the capability of being compact, simple and opportunistic in the advantageous use of ice storage generally required in bars in this country. Further, the system is able to reliably provide drinks at an ideal temperature, even the "casual drink". The present system does not require a mechanical refrigeration system with all attendant difficulties including the use of excessive space, the generation of excessive heat and the inability to reduce carbonated water temperature to 33°F and below. The present system provides substantial capability through induced recirculation with the inclusion of heat transfer coils in an ice storage bin. The induced recirculation provides the capability for the provision of a cold drink throughout the range from a "casual drink" to high volume. Further, the drink provided is of even greater quality because the temperature limiting capability of the ice storage bin allows the carbonated water within the closed circuit to safely approach freezing. Induced recirculation and heat transfer coils in the ice storage bin insure the low temperature and the capability to maintain that temperature. The system stores the body of cold by using the recirculation circuit and the ice storage with the coils.

Thus, the recitations of claims 1 through 10, rejected as obvious over Vogel in view of Chang, recite a "*recirculation circuit*". Further, a circulation pump is said to induce "*circulation in the carbonated water recirculation circuit*". The references applied in the obviousness rejection do not teach this combination of features.

2. Vogel

Looking again to Vogel, there is no recirculation of carbonated water through a closed circuit including a pump and heat transfer coils within an ice storage bin. Vogel follows conventional wisdom discussed above that a mechanical refrigeration system which expends electricity to cool fluid appropriately flows around a closed circuit. Indeed, a conventional mechanical refrigeration system is only efficient working over a period of time with the coolant below freezing temperatures rather than attempting to flash cool a liquid on demand. By comparison, conventional wisdom dictates that a cold plate or other passive heat transfer device operates with a sufficiently long coil to transfer heat from the fluid using a single pass. Temperatures in the high 30's° F were accepted.

Vogel, in recognizing this state of the art, provides circulation from a mechanical refrigeration unit to establish a cold sink. In the first embodiment, that cold sink is a pool of ice water. In the second embodiment, the mechanical refrigeration system establishes a cold sink at the manifold 32 insulated within the block of thermal insulation 106. In contrast, the cold plate of Figures 8 and 9 have the ice and cold plate as a cold sink which seemingly does not have to be built up to provide a supply of cold liquid to the dispenser valves.

3. Chang

In addition to Vogel, Chang is applied to describe a circulation pump. However, Chang, like the first embodiment of Vogel, employs an ice bath in association with a mechanical refrigeration system for generating a cold sink. The circulation pump of Chang is employed to circulate carbonated water through the cold tank. There are no coils in an ice bin in Chang; and the only cold plate in Vogel does not provide for a closed circuit. Thus, the circulation pump of Chang is simply incompatible with the cold plate of Vogel as employed in Figures 8 and 9 thereof. Chang adds nothing to Vogel which in any way touches upon a closed circuit employed with heat transfer coils in an ice storage bin.

4. Bilskie et al.

In the Official Action, a specific recitation to a bar gun is dismissed as being synonymous with a dispenser valve. As support, reference was made to Bilskie et al., U.S. Patent No. 6,021,922. Bilskie et al does not support this proposition. Bilskie et al. is describing a bar gun at column 7, line 46 *et seq.:*

> As such, the operator can use the beverage dispensing valve, commonly referred to as a "bar gun" to dispense either flat water supplied by the flat water supply line 74 or carbonated water supplied by the carbonated water supply pipeline 82. Similarly, concentrated syrup, or other concentrated liquid, can be dispensed such that a mixed flat or carbonated drink can be post mixed in a selected beverage container C. The described bar gun operates to dispense multiple substances upon selection. Thus, this valve is not just any valve. Rather, it is what we all know to be and what is specifically disclosed in the specification of the present application to be, a "bar gun".

Clearly Bilskie et al. teaches a valve which is more specifically the uniquely configured "bar gun". Nowhere in Bilskie et al. is the phrase "bar gun" universally applied to all

dispenser valves. Indeed, a bar gun has multiple dispenser valves, one of which is for carbonated water.

5. The standard applied

MPEP § 2142 establishes the standard for a *prima facie* case of obviousness under 35 U.S.C. 103:

> **ESTABLISHING A *PRIMA FACIE* CASE OF OBVIOUSNESS**
>
> To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicants disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143 - § 2143.03 for decisions pertinent to each of these criteria.

The teachings, taken separately or in combination, of Vogel, Chang and Bilskie et al. fail to disclose the combination of a *"recirculation circuit"* including a *"circulation pump"* and *"heat transfer coils"* in an *"ice storage bin"*. Further, the unique application to the environment of a bar through recitation of a "*bar gun*" is not in any way incorporated into any such combination. A recirculation circuit with a pump and heat transfer coils in an ice bin coupled to a bar gun is not taught in the applied prior art. Further, there is no teaching which has been presented in the Official Action or which can be found in Vogel or Chang to support, suggest or in some way induce the presently claimed combination. The Official Action fails to incorporate any such teachings, suggestions or motivations from the applied prior art.

Further, the prior references are incompatible with the combination of present claims 1 through 10. Vogel is focused upon a manifold with multiple heads attached thereto. Chang is unclear on the number of dispenser valves but also includes a system as in the first embodiment of Vogel which is large to the point of being absurd for application in an environment designed for drink distribution using a bar gun.

The environments in which bar guns are employed, described above, are wholly incompatible with either Vogel or Chang. Vogel employs multiple spouts in advantageous association with a manifold 32. This is at the heart of the teaching of Vogel pertaining to the manifold as the subject of the Vogel invention. Chang only illustrates a mechanical refrigeration system and a substantial cooling tank 100. This too is incompatible with the bar environment. Thus, neither Vogel nor Chang suggests employment with a bar gun.

The bar gun is vastly different from a fountain in a very relevant way to the present considerations as noted above. The fountain has several valves which are stationary and separated to accommodate the placement of a cup under each. As such additional piping in the form of a manifold is needed to feed carbonated water to the several displaced valves. To also not lose pressure to the individual valves regardless of the use of other valves, the manifold is significant in size. The temperature of the "casual drink" is highly affected by the volume in the manifold which is not know to ever be insulated or cooled. In comparison, a bar gun is taken to the cup and has only one carbonated water valve with multiple syrup channels. There is very little volume in such devices. Considerations regarding stagnant volume pending a "casual drink" is discussed regarding the leads to the bar gun in the Specification of the present

application. The two devices, the fountain and the bar gun, are not at all similar in consideration of thermal and temperature requirements.

The present invention is a combination providing substantial utility. The elements as recited in claims 1 through 10 can be configured to advantageously employ the necessary ice storage bin associated with a bar, to provide uncomplicated equipment which does not generate substantial heat and does not require substantial room. These features are again of high utility in combination with the recited bar gun. Finally, the employment of a closed circulation circuit through the heat transfer coils creates a reservoir of cold fluid appropriately extended to near or at the point of use which is able to accommodate both high flow and the "casual drink". These advantages are not provided, suggested or motivated by the applied references.

Also not provided, suggested or motivated by the applied references, circulation in a closed circuit with heat transfer coils allows consistent temperatures within a very desirable drink temperature range. As noted in the prior Response to Official Action, mechanical refrigeration systems are unable to control temperature appropriately such that the system can chill carbonated water to achieve the near freezing range without the danger of ice in the line. Single-pass cold plates do not provide flexibility. As flow changes, temperature is impacted. When there is a lack of residence time for the carbonated water in the cold plate, the plate becomes less and less efficient as the temperature of the drink liquid approaches ice temperature. Heat transfer diminishes with a reduction in the differential temperature between the ice and the carbonated water. As heat transfer decreases, the carbonated water requires more residence time to achieve the maximum capability of the system. As such, the resulting product is not

properly chilled. Further, in a bar where the equipment is appropriately out of sight, a significant lead line is likely required to reach the bar gun. Without closed circuit circulation to an appropriate point near the bar gun, the casual drink is drawn from warm lines between the cooling unit and the dispenser valve. Without closed circuit circulation, the temperature of the casual drink can be significantly compromised through mixing with warmed liquid in the lines.

Thus, combinations as presented in claims 1 through 10 of the present application do not find counterparts in the asserted prior art. Further, there is no suggestion or motivation for this system which defies conventional wisdom regarding coils in ice storage bins, and provides the capability of accommodating the demanding bar environment. Accordingly, a *prima facie* case of obviousness cannot be established through the applied references.

Claims 23, 24, 26, 27, 29 and 30 depending from the device claims additionally reference the capacity of the circulation pump used. The low capacity has no place in a mechanical refrigeration unit and are meaningless in the context of Vogel, Chang and Bilskie et al. None of these references teach such circulation, thereby failing to support a *prima facia* case of obviousness requiring all elements to be disclosed.

D. Conclusion

None of the applied references, taken for purposes of anticipation or obviousness, provide heat transfer coils in a recirculation circuit. In claims 1 through 10, apparatus is described including a bar gun in association with this circuit and the heat transfer coil in a ice storage bin. The references do not present teachings, suggestion or motivation for this combination. The method claims are further not anticipated as,

again, there is no closed circuit circulation of carbonated water through heat transfer coils to the point of achieving a fluid temperature of 33° F or below. Thus, the prior art is insufficient to establish a *prima facie* case of unpatentability as they are applied to any of the rejected claims.

The added claims 13 through 30 also present added features which are discussed above. These features are not found in the references applied. Neither anticipation nor obviousness under the standards set forth above is supported by the applied references to Vogel, Chang and Bilskie et al.

Consequently, a Notice of Allowance is earnestly solicited.

Respectfully submitted,

FULBRIGHT & JAWORSKI L.L.P.

January 19, 2005

By: ______________________
John D. McConaghy
Reg. No. 26,773

Fulbright & Jaworski L.L.P.
865 South Figueroa Street
Twenty-Ninth Floor
Los Angeles, California 90017-2576
(213) 892-9200